

REMARKS

Applicants have now had an opportunity to carefully consider the comments set forth in the Office Action mailed March 17, 2006. All of the rejections are respectfully traversed. Amendment, reexamination and reconsideration in view of the following remarks are respectfully requested requested.

The Office Action

In the Office Action mailed March 17, 2006:

claim 11 was rejected under 35 U.S.C. 112, second paragraph, as being indefinite;

claims 1, 3, 6, 7, 12-15 and 17-20 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,501,556 to Nishii ("Nishii");

claims 2 and 11 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nishii in view of Japanese Publication No. 07-307827 by Nakajima Toru ("Nakajima Toru"); and

claims 9 and 19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nishii in view of U.S. Patent No. 5,550,614 to Motoyama ("Motoyama").

The Present Application

By way of brief review, the present application is directed toward methods and systems for automatically or semi-automatically removing unwanted image data from main job input image data and producing main job output images based on the abridged input image data, thereby producing a main output job with unwanted portions removed. For example, the methods and systems may be used to remove blank pages or images of separator sheets from main job input image data so that main job output does not include unnecessary and, therefore, wasteful sheets.

The Cited References

In contrast, none of the cited references disclose removing portions of main job image data to produce main job output that does not include designated unwanted portions.

The primary reference of the Office Action to Nishii allegedly discloses an

image forming apparatus having a trial print mode. In the trial print mode, input image data are processed into minified images for trial output such that a user can check an output result to be obtained in the normal mode beforehand. In the trial print mode, a blank page detector detects a blank page from the input image data and an image data minifier converts the image data stored in an image buffer into minified image data and stores the data in a second buffer. Even if Nishii discloses removing blank page data from such minified trial image printing, Nishii does not disclose or suggest removing blank pages or graphic image data from main job input data for removing blank pages from main job output.

It is respectfully submitted that Nakajima Toru and Motoyama do not remedy the deficiencies of Nishii.

For example, it is respectfully submitted that the image processing unit of Nakajima Toru is for the purpose of preventing useless transmission and reception of image data by identifying invalid received image data and informing it to the user (Purpose portion of the Abstract). For instance, with the system of Nakajima Toru, "a user is notified of whether reading of the manuscript was normally performed immediately after reading the manuscript of one sheet in any case. When it is judged that there is no contrast, a user performs adjustment of reading sensibility, etc., and reads again" (paragraph 13). In this regard, it is respectfully submitted that Nakajima Toru does not disclose or suggest removing blank pages from an input or output stream. Instead, it is submitted that Nakajima Toru discloses notifying a user of questionable or invalid image data and expects the user to take corrective action such as reorienting pages (e.g., flipping them over so that the appropriate side is facing the scanner) or adjusting a darkness or contrast setting. In either case, the pages are rescanned. In this way, legible documents are printed or transmitted by facsimile. It is respectfully submitted that Nakajima Toru does not disclose or suggest removing individual pages or portions from main job image input data or main job output data.

Motoyama allegedly discloses a method and system for detecting and distinguishing between blank pages within a reproduction job. The page analysis system of Motoyama allegedly detects blank pages within a job and distinguishes between initial blank pages caused by incorrectly oriented original pages within a machine, and intentionally blank pages within the middle of a job (Abstract). It is an

object of the invention of Motoyama to provide a blank page distinguishing and detection system and method that can detect an incorrectly placed reproduction job in an automatic document feeder (multiple initial blank pages in a reproduction job) and abort it, but can also permit a blank page within the middle of a reproduction job to be printed normally (column 2, lines 1-10). In this regard, it is respectfully submitted that by explaining that it is an object of the system of Motoyama to print blank pages in the middle of a job, Motoyama teaches away from the claims of the present application. Therefore, it is respectfully submitted that Motoyama is not fairly combined with Nishii and Nakajima Toru against the claims of the present application.

Moreover, it is respectfully submitted that since Motoyama describes permitting a blank page within the middle of a reproduction job to print normally as a desirable objective, removing blank pages from within the middle of a reproduction job so that they are not included in main job output as disclosed and claimed in the present application, cannot be considered to be obvious in light of Motoyama.

The Claims are Definite

Claim 11 was rejected under 35 U.S.C. 112, second paragraph as being indefinite. The Examiner objected to the recitation of a method for automatically excluding that recites notifying an operator that an unwanted portion has been located and accepting one of an authorization and a prohibition from the operator. However, **claim 11** has been amended to recite semi-automatically excluding unwanted portions. Additionally, **claim 11** has been amended to recite locating a portion of the input image data that has a described characteristic, thereby locating a potentially unwanted portion, notifying an operator that the potentially unwanted portion has been located and accepting one of an authorization and a prohibition from the operator to remove the potentially unwanted portion.

For at least the foregoing reasons, it is respectfully submitted that **claim 11** is definite and particularly points out and distinctly claims the subject matter which applicant regards as the invention. Accordingly, withdrawal of the rejection under 35 U.S.C. 112, second paragraph, is respectfully requested.

The Claims are not Anticipated

Claims 1, 3, 6, 7, 12-15 and 17-20 were rejected under 35 U.S.C. 102(e) as being anticipated by Nishii.

However, **claim 1** has been amended to recite: a method operative to automatically exclude an unwanted page in an input stream of a printing system main print job from an output job of the main print job, the method comprising *inter alia*: removing the identified pages thereby excluding them from the main print job output stream.

Even if the assertions of the Office Action with regard to the disclosure of Nishii and **claim 1** are correct, the techniques of Nishii are only operative in a "trial print mode" in regard to "minified images." It is respectfully submitted that Nishii does not disclose or suggest removing or excluding blank or other unwanted pages from an input stream of a printing system main print job from an output stream of the main print job.

For at least the foregoing reasons, **claim 1**, as well as **claims 2, 3 and 7** are not anticipated and are not obvious in light of Nishii.

Regarding **claim 3**, the Office Action asserts that Nishii teaches that the printer receives commands from a user. However, **claim 3** recites requesting permission from a user. It is respectfully submitted that generic disclosure of a printer receiving commands does not disclose or suggest requesting permission from a user.

For at least the foregoing additional reasons, **claim 3** is not anticipated by Nishii.

Claim 6 was canceled in Applicants' Amendment B.

Regarding **claim 7**, the Office Action asserts that Nishii discloses a blank page output mode and that this reads on describing characteristics of a non-blank separator sheet. However, it is respectfully submitted that Nishii is silent with regard to separator sheets. Moreover, it is respectfully submitted that disclosure of a blank page output mode does not disclose or suggest describing characteristics of a non-blank separator sheet.

For at least the foregoing additional reasons, **claim 7** is not anticipated by Nishii.

Claim 12 has been amended to recite a method operative to automatically

exclude unwanted portions of a main job from a main job output stream of a printing system, the method comprising *inter alia*: locating a portion of the main job input data that has the described characteristics, deleting the located portion from the main job input data to generate main job output data and delivering the main job output data to the output stream. Arguments similar to those submitted in support of **claim 1** are submitted in support of **claim 12**. Nishii is concerned with a trial print mode in which the input image data are processed into minified images on fewer pages of paper for trial output (Abstract). As such, Nishii does not disclose or suggest automatically excluding unwanted portions of a main job from a main job output stream of a printing system or deleting the located portion from a main job input data to generate main job output data.

For at least the foregoing reasons, **claim 12** is not anticipated by Nishii.

Claim 13 has been amended to recite a printing system operative to automatically remove unwanted portions of main print job input image data, the printing system comprising a pattern detector operative to receive an arbitrary description of an unwanted portion of the main print job input image data, search for a portion of the main print job input image data that corresponds to the unwanted portion description, and relate information about a found portion that corresponds to the description, and a portion leader operative to receive information from the pattern detector regarding a location of the at least one unwanted portion of the main print job input image data and to remove the at least one unwanted portion of the main print job input image data to generate main print job output image data.

In this regard, arguments similar to those submitted in support of **claims 1** and **12** are submitted in support of **claim 13**.

For at least the foregoing reasons, **claim 13**, as well as **claims 14** and **15**, which depend therefrom is not anticipated and is not obvious in light of Nishii.

Claim 20 has been amended to recite a printing system operative to automatically exclude unwanted non-blank pages of a job from a main job output stream, the system comprising *inter alia*: means for deleting the located page from the main job input data to generate main job output data. It is respectfully submitted that Nishii is concerned with a “trial mode” and “minified images” and does not disclose or suggest deleting blank pages from main job output data.

For at least the foregoing reasons, **claim 20** is not anticipated and is not

obvious in light of Nishii.

The amendments to the claims are supported throughout the specification. For example, that the present application is directed at removing unwanted portions of a main job is clear from the discussion on pages 1 and 2 of the present application as well as from the Abstract.

Support for the amendments related to the semi-automatic nature of the process recited in **claim 11** are supported by **claim 11** as originally filed as well as, for example, FIGURE 1, reference numeral 148 and the decision box therebelow and, for example, page 6, line 29 - page 7, line 29.

New **claim 21** recites the printing system of **claim 20** wherein the means for describing one or more characteristics of a non-blank page that is unwanted comprises means for describing text included on the unwanted non-blank page.

Support for new **claim 21** is found, for example, page 5, lines 15-29.

It is respectfully submitted Nishii does not disclose or suggest means for describing text included on an unwanted non-blank page.

For at least the foregoing reasons, **claim 21** is not anticipated and is not obvious in light of Nishii.

The Claims are not Obvious

Claims 2 and 11 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nishii in view of Nakajima Toru.

Claim 2 depends from **claim 1** and is patentably distinct for at least that reason. Additionally, **claim 2** recites notifying an operator in response to detecting data representative of the characteristic (i.e., the characteristic of an unwanted page). The Office Action stipulates that Nishii fails to disclose notifying an operator of such detected data and relies on Nakajima Toru for this disclosure. However, even if Nakajima Toru discloses notifying an operator, it is respectfully submitted that Nakajima Toru does not disclose or suggest notifying the user of detecting data representative of the characteristic of an unwanted page to be removed from an output stream. Instead, it is respectfully submitted Nakajima Toru notifies the operator of some problem with the input image data. For example, pages to be scanned may have been placed in the scanner upside down or a brightness or contrast setting may not be set properly (e.g., see paragraph 13).

For at least the foregoing reasons, **claim 2** is not obvious in light of Nishii and Nakajima Toru taken alone or in any combination.

Claim 11 has been amended to recite a method operative to semi-automatically exclude unwanted portions of a main job from a main job output stream of a printing system including *inter alia*: accepting one of an authorization and prohibition from an operator to remove a potentially unwanted portion, determining that the potentially unwanted portion is an unwanted portion if the authorization is accepted and removing the unwanted portion from the main job input stream, thereby excluding the unwanted portion from the main job output stream.

In this regard, arguments similar to those submitted in support of **claims 1, 12 and 13** are submitted in support of **claim 11**. Additionally, the Office Action stipulates that Nishii fails to disclose notifying an operator that an unwanted portion has been located and relies on Nakajima Toru for such disclosure. However, Nakajima Toru does not notify an operator that an unwanted portion has been located. Instead, Nakajima Toru notifies a user of invalid data in an input stream thereby allowing a “user to perform adjustment of reading sensibility, etc.”, and reads again (paragraph 13).

For at least the foregoing reasons, **claim 11** is not obvious in light of Nishii and Nakajima Toru taken alone or in any combination. Additionally, it is respectfully submitted that the Office Action has not met its burden for presenting a case of *prima facie* obviousness.

It is respectfully submitted that the motivation for combining Nishii and Nakajima Toru suggested by the Office Action is specious. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination (MPEP 2143.01(III)). Nishii does not disclose or suggest that a user could or should be notified when a characteristic is detected. Nakajima Toru notifies an operator that invalid data has been detected so that pages can be reoriented and rescanned or so that sensitivities can be adjusted and pages rescanned (paragraph 13). Nishii and Nakajima Toru do not disclose or suggest notifying a user that a characteristic of an unwanted page or document portion has been detected so that the user or operator can authorize or prohibit the removal of that portion from input image data thereby

removing it from an output stream.

Furthermore, it is respectfully submitted that any motivation to make the combination of Nishii and Nakajima Toru could only have been found in the present application. Therefore, the rejection of **claims 2 and 11** is based on impermissible hindsight and, for this additional reason, the Office Action has not met its burden for presenting a case of *prima facie* obviousness.

Claims 9 and 19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nishii in view of Motoyama. However, even if the assertions of the Office Action with regard to the disclosure of Nishii are correct, Motoyama teaches away from removing blank pages from within the middle of a reproduction job by declaring that it is an objective of Motoyama to provide a system that permits a blank page within the middle of a reproduction job to print normally (column 2, lines 1-10). For at least the foregoing reason, **claims 9 and 19** are not anticipated and are not obvious in light of Nishii and Motoyama taken alone or in any combination.

Additionally, **claims 9 and 19** depend from **claims 12 and 13**, respectively, and are patentably distinct for at least those reasons.

Furthermore, **claim 9** recites searching within input image data comprises using pattern recognition techniques to search for matching characteristics. The Office Action stipulates that Nishii fails to disclose searching within an input image data comprises using pattern recognition techniques and relies on Motoyama for this disclosure. However, the Office Action also stipulates that Motoyama discloses comparing the digital page data to a black spot threshold. Additionally, the Office Action asserts that the Applicant is correct in asserting that Motoyama does not recognize patterns (section 6, page 3, of the Office Action). Furthermore, it is respectfully submitted that one of ordinary skill in the art would understand that the phrase --pattern recognition techniques-- involves something other than counting the number of black spots on a page.

For at least the foregoing reasons, **claim 9** is not anticipated and is not obvious in light of Nishii and Motoyama taken alone or in any combination.

Additionally, it is respectfully submitted that the Office Action does not meet its burden for presenting its case of *prima facie* obviousness. The Office Action asserts that Nishii could have easily been modified to scan a page and compare a

digital page data to a black spot threshold of Motoyama. However, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination (MPEP 2143.01(III)). It is respectfully submitted that there is no motivation in the art to modify Nishii according to the black spot threshold of Motoyama other than that provided by the present application. Therefore, the rejection of **claim 9** is based on impermissible hindsight.

With regard to new **claim 21**, it is respectfully submitted that Nishii, Motoyama and Nakajima Toru do not disclose or suggest means for describing text included on an unwanted non-blank page as recited in **claim 21**.

Reply to Response to Arguments

The Applicants respectfully disagree with many of the assertions put forth in the response to arguments section of the present Office Action.

For example, with regard to **claim 2**, section 3 of the Response asserts that notifying an operator of a blank page is a sufficient motivation for combining Nishii and Takajima Toru.

However, it is respectfully submitted that the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests desirability of the combination (MPEP 2143.01(III)).

It is respectfully submitted that the Office Action does not identify a disclosure or suggestion in Nishii that an operator could or should be notified of blank pages. Nakajima Toru provides notification and does not need to be combined with Nishii for this purpose. Therefore, the Office Action does not meet its burden of providing a *prima facie* case of obviousness. Furthermore, it is respectfully submitted that any motivation to combine Nishii and Nakajima Toru can only have been found in the present application. Therefore, rejections based on this combination are based on impermissible hindsight.

With regard to **claim 3**, section 4 of the Response to Arguments directs the attention of the Applicants to column 5, lines 1-5, of Nishii and asserts that Nishii discloses that the printer receives commands from a user. However, **claim 3** recites requesting permission to remove identified pages. It is respectfully submitted that disclosure of receiving commands does not disclose or suggest requesting

permission to remove identified pages.

Regarding **claim 7**, section 5 of the Response to Arguments section makes assertions with regard to the graphic data detector of Nishii. However, Nishii does not disclose or suggest that the graphic data detector detects characteristics of unwanted portions of a job. Instead, Nishii discloses that graphic portions can be represented by a frame in a set of minified images and that the entire graphic data can be printed in full size in instances where a minified version of the graphic data would not be fully usefull (e.g., column 3, lines 18-27; column 6, lines 40-47).

Regarding **claim 9**, section 6 of the Response to Arguments section stipulates that Motoyama does not recognize patterns. Additionally, this section makes reference to page 8, line 30 - page 9, line 10, of the present application, although it is respectfully submitted that it is not entirely clear why these portions of the present specification are being referenced. It may be that the Office wished to point out that page 8, line 30 - page 9, line 1, indicates that the pattern detector 220 of the present application can receive a blank page description. However, it is respectfully submitted that **claim 9** is directed to the alternative situation described, for example, on page 9, lines 1-10, wherein, for example, it is indicated that the pattern detector 220 can accept a separator page phrase from an operator through a keyboard, or can receive instructions to accept a separator page pattern from an image source 228. The pattern detector then examines input data in search of the described pattern (e.g., page 9, lines 11-17).

Since the Office Action stipulates that Motoyama does not recognize patterns, it is respectfully submitted that **claim 9** is allowable.

Remarks similar to those submitted with regard to **claim 9** are also submitted in reply to the remarks regarding **claim 13** found in section 8 of the Response to Arguments section of the Office Action.

Additionally, this section of the Response to Arguments asserts that the interpreting section of Nishii receives input data and interprets the input data as blank page or graphic data. However, the interpreting section 9 interprets an entered command (column 6, lines 55-56) and does not interpret input data as a blank page or graphic data. A graphic data detector 11 of Nishii performs a detection of graphic data. However, Nishii does not disclose or suggest graphic data is unwanted. Instead, Nishii discloses representing graphic data with a frame

in a page of minified images and rendering graphic data at normal size if a minified version of the graphic data would be too small to evaluate (column 7, lines 11-41). Moreover, the graphic data detector in Nishii does not receive an arbitrary description of graphic data as recited in **claim 13**.

With regard to **claim 20**, section 11 of the Response to Arguments section asserts that Nishii discloses a graphic data detector that detects graphic data "via the blank detector," which could be an unwanted non-blank page of a job from an output stream. However, **claim 20** recites, and Nishii does not disclose or suggest, a means for describing one or more characteristics of a non-blank page that is unwanted.

Telephone Interview

In the interests of advancing this application to issue, the Applicants respectfully request that the Examiner telephone the undersigned to discuss the foregoing or any suggestions that the Examiner may have to place the case in condition for allowance.

CONCLUSION

Claims 1, 2, 3, 7, 9, 11-15, 18-20 remain in the application. **Claim 21** has been added. For the reasons detailed above, it is submitted all claims remaining in the application are now in condition for allowance. The foregoing comments do not require unnecessary additional search or examination.

Respectfully submitted,

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